

Amendments to the Specification:

Please replace the paragraph beginning at page 9, line 1, with the following rewritten paragraph:

With each mini-headend 400, 402, and 404 serving a smaller group of subscribers, noise and interference on the cables 408 is substantially less than that on the cables 300 of Figure 3. Furthermore, the reduced number of subscribers per mini-headend may facilitate assigning a narrow frequency band to each subscriber which significantly increases Quality of Service. Since the mini-headends 400, 402, and 404 ~~etc.~~ may well be positioned in remote neighborhood locations, the bulk, expense, and power consumption of each receiver system 104 should be minimized. As previously described, the front end of the receiver system 104 reduces the number of ADCs required, in comparison with conventional receivers and, as will be described, may afford further savings in energy, bulk, and capital outlays.

Please replace the paragraph beginning at page 14, line 19, with the following rewritten paragraph:

Turning now to the conceptual block diagram of Figure 10, which is a specific illustrative embodiment of the TDD of Figure 7. In this illustrative embodiment, an iterative TDD ~~front end~~ ~~processor~~ 1000 is configured to process signals in a band from 6.4 MHz to 44.8MHz, having non-overlapping channels of a bandwidths of approximately 3.2MHz, 1.6 MHz, .8 MHz, .4 MHz, or .2 MHz. The channels are organized into 3.2 MHz wide group channels that have center frequencies at  $4.8 + 3.2(N)$  MHz (where  $N=1,2,3... 11$ ). Such a front end processor is

particularly useful in a DOCSIS-like system that may be employed in conjunction with distributed mini-headends such as described in the discussion related to Figure 4.

Please replace the paragraph beginning at page 16, line 24, with the following rewritten paragraph:

Similar to the ~~front-end processor~~ TDD 1000, the follow-on stage 1100 includes an array of multiplication 1102-1112 and decimation 1114-1124 stages whose functions are, as described in the discussion related to Figure ~~1000~~10, to shift channels to baseband and to filter the shifted channels to thereby yield signals of interest. However, since the follow-on stage 1100 is not operating on the entire upstream band, but, rather, on individual group channels, the ~~follow-on~~ follow-on stage 1100 includes "bypass" data paths 1126-1138 for those channels that have been fully downconverted and decimated. For example, if the ~~follow-on~~ follow-on stage 1100 is operating on group channel data for which there is a single, 3.2 MHz channel, the bypass path 1126 would be employed to pass data through to a receiver 110, such as described in the discussion related to Figure 1 and will be described in greater detail in the discussion related to Figures 12 and 13. Similar paths are provided at each stage of the follow-on ~~processor stage~~ stage 1100 which includes a sufficient number of such stages to reduce all the data to channel specific baseband data. For example, in this illustrative embodiment, four stages (not all shown) would be required, one to process 3.2 MHz group channel to two 1.6 Mhz groupings, a second stage to process the 1.6 MHz groupings to combinations that might include 1.6MHz and .8MHz and .4MHz channels and a fourth stage to process .4MHz groupings that might include .4MHz and .2MHz channels.

Please replace the paragraph beginning at page 17, line 13, with the following rewritten paragraph:

Just as the front end processor 700 described in relation to the discussion of Figure 7 may be used with any number and any arrangement of channels distributed throughout a frequency band to produce an output data stream representative of each component channel sampled at least twice the symbol rate of each of the channels, various combinations of the TDD 1000 described in the discussion related to Figure 10 and the ~~follow~~follow-on ~~processor stage~~ 1100 described in the discussion related to Figure 11 may be employed to provide similar demodulation and decimation of signals in DOCSIS-like communications systems that, unlike DOCSIS, assign fixed frequencies to frequency sub-ranges within an upstream band.